IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

GARY P. COTE

Serial No.: 09/899,029 Art Unit: 3683

Filed: July 6, 2001 Examiner: R. Siconolfi

For: WHEELBARROW BRAKING SYSTEM

APPEAL BRIEF

To the Commissioner of Patents and Trademarks

Sir:

REAL PARTY IN INTEREST

The above-identified Applicant is the real party in interest in this case.

RELATED APPEALS AND INTERFERENCES

No other related appeals or interferences are pending at this time.

STATUS OF CLAIMS

Claims 3-16, 25, 26, 28, 31-36 and 39-47 were finally rejected over references of record.

Claims 17, 18, 37 and 38 were indicated to be allowable if rewritten in independent form. Claims 17 and 37 have been

amended in a concurrently filed Response placing those claims in condition for allowance.

Claims 16 and 30 were objected to as being dependent on cancelled claims. Claims 16 and 30 have been amended in a concurrently filed Response correcting claim dependencies.

Claims 25 and 26 were rejected under 35 U.S.C. 112, second paragraph. Claim 25 has been amended in the concurrently filed Response, as specified in the office action, relating that claim back to the original claim, without adding new matter or raising new issues.

Claims 1, 2, 19-24, 27 and 29, which were withdrawn from consideration, have been cancelled.

A copy of the appealed claims is appended hereto in the Appendix.

STATUS OF AMENDMENTS

An Advisory Action dated February 28, 2003 indicates that the amendments proposed in the Response filed February 5, 2003 "will not be entered". Applicant awaits the Examiner's reply to the Amendments proposed in the concurrently filed Response.

SUMMARY OF THE INVENTION

The wheelbarrow braking system of the present invention (Specification pages 1-8; Figures 1-8) helps a person control the speed of a wheelbarrow on a slope. The present invention comprises a brake kit for a wheelbarrow, including a braking

mechanism such as, but not limited to, a drum brake, a disc brake assembly or a caliper brake for the wheel, a control cable, and a motorcycle "twist-type" control handle, which is installed in place of one of the regular handle grips. A simple twist of the handle operates the brake cable to activate the braking mechanism. In addition to being added to new wheelbarrows during manufacture, the braking system of the present invention may be retrofit onto existing wheelbarrows. The design of the braking system may be tailored to suit heavy- or light-duty wheelbarrows for all manner of applications. (specification page 2, lines 2-14).

The main benefit of the wheelbarrow braking system described herein is the added control it provides for a wheelbarrow user. The braking system is easy to add to either a new or existing wheelbarrow, and once installed, it provides a way to slow or stop the wheelbarrow. By applying the brake slightly, a user can control the speed of the wheelbarrow on a hill. In this way, he may prevent the wheelbarrow from picking up speed and escaping his grasp. The user may stop the wheelbarrow safely while on a hill simply by turning the brake control to its fullest extent. Using the brake is much easier than holding back the wheelbarrow physically. With a load of heavy material in it, a wheelbarrow may be quite difficult for a person to push or pull, especially on a hill. It may take all the person's strength and most of the muscles of his body to move or restrain the load with this braking system, though, slowing or stopping a rolling wheelbarrow

only requires the turning power of a single hand, thus saving a lot of physical exertion and possibly preventing muscle strains or similar injuries. (specification page 2, line 15 to page 3, line 6).

This wheelbarrow braking system is similar in both design and construction to braking systems currently used for the rear brakes of automobiles and motorcycles. The system includes a braking mechanism. A preferred embodiment of the braking system comprises a pair of spring-loaded brake shoes mounted inside a steel drum assembly. A plastic drum with a steel liner may be substituted for an all-steel brake drum for a lighter-duty version of this embodiment of the wheelbarrow braking system. The drum brakes of a preferred embodiment are totally enclosed and sealed within a brake drum for safety and to keep external debris from interfering with the components of the brake. The braking mechanism of the wheelbarrow braking system is not limited to a drum brake. (specification page 3, lines 6-18).

For a single-wheeled wheelbarrow, a preferred embodiment of the braking mechanism comprises a spring loaded brake drum with brake shoes, or a caliper with a disc on either side of the rim. For a heavier-duty, two-wheeled wheelbarrow, a preferred embodiment of the braking system comprises a brake drum mounted in the center of the axle upon which the two wheels are supported. In both cases, the braking mechanism is connected to the control handle for the brakes via a steel brake cable. This control handle, in essence a twist-type motorcycle handle is

conveniently mounted at the end of a handle bar. Simply twisting the handle activates the braking system. This allows the operator to maintain contact with both handle bars during braking, facilitating greater control of the wheelbarrow. (specification page 3, line 19 to page 4, line 6).

Caliper brakes may be used in the wheelbarrow braking system of the present invention. The caliper brakes press a brake pad against a fixed disc of the wheelbarrow to slow the wheelbarrow by friction. The caliper brakes are supported on a brace, which spans the tire of the wheelbarrow, allowing the caliper brakes to act on both sides of the tire. A brake cable controls the engaging of the caliper brakes. The brake cable connects a twist-type handle to the caliper brakes. A slight twist of the handle results in a slowing of the wheelbarrow, while a quarter turn of the handle will stop the wheelbarrow completely. The amount of force exerted upon the handle is directly related to the degree of pressure exerted by the braking mechanism such as, but not limited to, a caliper brake. Once twisted a quarter turn the twist-type handle may be locked into position using a clipping means. This serves as a parking brake for the stopped wheelbarrow. The brake cable may terminate in a large pitch screw which moves freely in both directions or which requires force to move in either direction or preferably which is spring loaded in the brake releasing direction. (specification page 4, lines 7-25).

A preferred embodiment of the wheelbarrow braking system of the present invention incorporates a drum braking mechanism comprising a frame mounted caliper which presses against a disc mounted on the wheel of the wheelbarrow to slow the wheelbarrow by friction. A brake cable controls the engaging of the frame mounted caliper. The brake cable is connected to a twist-type handle. A slight twist of the handle results in a slowing of the wheelbarrow, while a quarter turn of the handle will stop the wheelbarrow completely. The amount of force exerted upon the handle is directly related to the degree of pressure exerted by a braking mechanism such as, but not limited to, a drum brake assembly. Once twisted a quarter turn, the twist-type handle may be locked into position using a clipping means. This serves as a parking brake for the stopped wheelbarrow. (specification page 5, lines 1-14).

ISSUES

Whether claims 25 and 26 are patentable under 35 U.S.C. 112, second paragraph?

Whether claims 31-34 are patentable under 35 U.S.C. 102 over Krauer (U.S. Patent 4,966,047)?

Whether claims 3-15, 25, 26, 46, and 47, as well as, claim 28 are patentable under 35 U.S.C. 103 over Miyazaki (U.S. Patent 6,173,799) in view of Krauer (U.S. Patent 4,966,047)?

Whether claims 35 and 36 are patentable under 35 U.S.C. 103 over Krauer (U.S. Patent 4,966,047)?

Whether claims 39, 40, 41, 42, as well as, claims 43, 44 and 45 are patentable under 35 U.S.C. 103 over Krauer (U.S. Patent 4,966,047) in view of Miyazaki (U.S. Patent 6,173,799)?

GROUPING OF CLAIMS

The claims do not stand or fall together.

ARGUMENTS

Claims 25 and 26 are patentable under 35 U.S.C. 112, second paragraph.

Claim 25 has been amended in a concurrently filed Response to address this issue. Applicant awaits the Examiner's reply on entry of the amendment which would simplify issues on appeal.

Claims 31-34 are patentable under 35 U.S.C. 102(b).

For an invention to be anticipated, it must be demonstrated that each and every element of the claimed invention is present in the "four corners" of a single prior art, either expressly described therein or under the principle of inherency. Lewmar Marine Inc. v Barient Inc., 3 USPQ2d 1766, 1767-1768 (CAFC, 1987). The absence from prior art reference any claimed element negates anticipation. Kloster Speedsteel AB v. Crucible, Inc., 230 USPQ 81, 84 (Fed. Cir. 1986).

Claims 31-34 are patentable under 35 U.S.C. 102(b) over Krauer (U.S. Patent 4,966,047).

Krauer relates to a cable control device for bicycle brakes in which the cable is drawn or pulled in by two internal beveled metal parts. The cable is fitted within the handlebar and the cable control is mounted at the end of the handlebar for coaxial rotation around the handle.

Claim 31 describes a braking mechanism which uses a twist-type handle for operating the brake and controlling speed of the wheelbarrow. Krauer neither shows nor by inherency provides a basis for that structure. Claim 31 further defines a brake cable connecting the twist-type handle and the brake, wherein the handle is twistable to a plurality of positions for controlling speeds of movement of vehicles coupled to the braking mechanism. Krauer does not describe, suggest or by inherency define the features of claim 31. Claims 32-34 depend from claim 31 and add other features neither found in, nor suggested by, the reference.

To be anticipating, a prior art reference must disclose "each and every limitation of the claimed invention[,]... must be enabling[,] and must describe...[the] claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention." In re Paulsen, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

Krauer expressly provides that the rotatable handle grip brake has several disadvantages and that the Krauer device removes those disadvantages by avoiding the rotatable handle grip

brake mechanism which has a cable connecting the handle and the brake. See columns 1, lines 44-68 to column 2, lines 1-29.

Krauer therefore mandates a hollow handle member that can be coaxial with and rotatable on the end of a handlebar with the brake cable attached inside. Krauer mandates the separate handle member for controlling the cable, so that the handlebar need not be moved to enable braking of the bicycle. Separate controls are provided for the front and rear brake cables on each side of the handlebar. Nothing in Krauer describes, teaches or by inherency provides the features of claim 31.

"To establish inherency, the extrinsic evidence 'must make it clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.'" In re Robertson, 48 USPQ2d 1949, 1951 (Fed. Cir. 1999) quoting from Continental Can Co. v. Monsanto Co., 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. Id. 20 USPQ2d at 1749.

Claim 32 adds to claim 31, that a twist of the handle slows the vehicles. Claim 33 adds to claim 31 that a quarter turn of the handle stops the vehicles. Contrastingly, Krauer expressly teaches how to avoid cable control by twisting the handle and requires having the rotatable control on ends of the handle for

that device to work. Krauer does not and cannot anticipate claims 32 and 33.

Claim 34 adds to claim 31 that an amount of force exerted upon the handle is directly proportional to a degree of pressure exerted by the brake. Krauer explains the deficiencies of directly exerting force on the handle and teaches how to avoid that by providing the controls coaxially on ends of the handle so that force is not translated by any handle movement but rather the independent movement of the end mounted control. Krauer does not and cannot anticipate claim 34.

Since the cited reference does not disclose all the elements of the present invention, the reference cannot anticipate the present invention. Thus, lacking an element of the claims, the reference cannot anticipate the invention. Carmen Indus., Inc. v. Wahl, 220 USPQ 481, 485 (Fed. Cir. 1983).

The present claims are patentable under 35 U.S.C. 103.

In considering the patentability of the present invention, it is requested that the Board consider the invention as a whole, consider the scope and content of the prior art as a whole, consider the differences between the claims at issue and the prior art, and consider the level of ordinary skill in the art to which the invention pertains at the time the invention was made. Graham v. John Deere Co., 148 USPQ 459, 467 (1966).

THE INVENTION AS A WHOLE

The invention considered as a whole is best described by the appended claims.

PRIOR ART AS A WHOLE

The prior art to which the invention pertains is typified by the references of record.

DIFFERENCES BETWEEN THE INVENTION AND THE PRIOR ART

Each of the present claims defines unique features and each is individually patentable over the prior art.

The test in reviewing rejections under 35 U.S.C. 103 in which the examiner has relied on teachings of several references, is whether references, viewed individually and collectively, would have suggested claimed invention to a person possessing ordinary skill in the art, and citing references which merely indicate that isolated elements and/or features recited in the claims are known is not a sufficient basis for concluding that combination of the claimed elements would have been obvious. Ex parte Hiyamizu, 10 USPQ2d 1393-1395 (Board of Patent Appeals and Inter., 1988); In re Kaslow, 217 USPQ 1089 (Fed. Cir. 1983); In re Deminski, 230 USPQ 313 (Fed. Cir. 1986).

Claims 3-15, 25, 26, 46 and 47, as well as, claim 28 are patentable under 35 U.S.C. 103 over Miyazaki (U.S. Patent 6,173,799) in view of Krauer (U.S. Patent 4,966,047).

Claim 46 points out a drum connected to the wheel and a twist-type brake control handle on the first handle bar, neither of which are found in the references and neither of which would have been obvious from the prior art. A twist handle controlling a drum brake is not found in or obvious from the prior art. Controlling a drum brake is not found in or obvious from the prior art.

Claim 47 points out the disc connected to the wheel and the twist-type brake control handle on the first handle bar, neither of which are found in the prior art and neither of which would have been obvious from the prior art.

Miyazaki relates to a device for a motorized single wheel cart. A brake lever controls the brake mechanism. Speed is controlled by two speed reducing elements disposed near the motor and near the wheel. Rotational speed of the motor is reduced by a one-way clutch that transfers power from the motor to the axle. Force needed for lighting up the handles is reduced by the speed reducing elements thereby reducing operational force of the handle. That teaches away from controlling the speed with a twist-type brake control handle as uniquely defined by the present claims. Miyazaki does not and cannot render the claimed invention obvious.

As previously pointed out, Krauer does not teach nor suggest the claimed invention. In fact, Krauer expressly teaches away from the present claims.

"It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." In re Fritch, 23 USPQ2d 1783, 1784 (CAFC, August 1992), quoting from In re Gorman, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). "This court has previously stated that one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." Id. quoting from In re Fine, 5 USPQ2d 1600 (CAFC, 1988).

The Examiner's use of the term interchangeably and/or unilaterally as if the handlebar and control mechanism of Krauer's was a single element forms an erroneous basis for all the rejections of record. Krauer repeatedly describes the two elements to be separate so that they can be operated separately to thereby avoid controlling the cable and brakes with the handle. However, the Examiner's interpretation of Krauer does not originate within the four corners of that reference and in fact is inapposite to the teachings of Krauer. Any combination of other reference teachings with Krauer will therefore lead away from the present claims.

"Particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the

manner claimed." In re Kotzab, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000).

It would not have been obvious to provide a twist-type brake control handle on a wheelbarrow handlebar. The twist-type brake control provides complete control of the wheelbarrow without loosening a grip to apply a brake, either when going down a slope, when stopping on an upslope, when stopping momentum of a fast moving loaded barrow, or when stopping the barrow to dump it.

In deciding that a novel combination would have been obvious, there must be supporting teaching in the prior art. There is no suggestion or motivation in the prior art to combine the elements as done by the present invention and hence the claims cannot be rendered obvious. In re Newell, 13 USPQ 2d 1248, 1250 (CAFC, 1989).

Neither Miyazaki nor Krauer has a brake on the wheel which permits dumping while braking. Miyazaki mounts the brake cover 71 of the brake mechanism 70 on the speed reducer 50, Figure 8, column 12, lines 30, 31. Miyazaki locks the wheel tread to the frame, prohibiting lifting the frame without releasing the brake. There is no prima facie case of obviousness with respect to any of the claims.

A rejection under § 103 is proper only when "the PTO establishes that the invention **as claimed** in the application is obvious over cited prior art, **based on the specific comparison of**

that prior art with claim limitations." In re Ochiai, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995) (emphasis added).

Dependent claims define further patentable features.

The Office Action is silent as to where in each of the references there is basis for the rejection of each of the features of each and every dependent claim.

> **The examiner cannot sit mum, leaving the applicant to shoot arrows into the dark hoping to somehow hit a secret objection harbored by the examiner. The 'prima facie case' notion ... was intended to leave no doubt among examiners that they must state clearly and specifically any objections (the prima facie case) to patentability, and give the applicant fair opportunity to meet those objections ... the concept serves to level the playing field and reduces the likelihood of administrative arbitrariness.** (emphasis added) In re Oetiker, 25 USPQ2d 1443, 1447 (Fed. Cir. 1992) (Plager, J., concurring); see In re Piasecki, 233, USPQ 785, 788 (Fed. Cir. 1984).

Applicant is therefore unable to adequately rebut the non-existent evidence and is faced with an undue burden to determine the Examiner's basis for the blanket rejection of all the claims.

If examination at the initial stage does not produce a prima facie case of unpatentability, then without more the applicant is entitled to grant of the patent. In re Oetiker, 25 USPQ2d 1443, 1447 (Fed. Cir. 1992) citing In re Grabiak, 226 USPQ 870, 873 (Fed. Cir. 1985).

In fact, the office action does not provide any basis for the rejection of each of the features in every dependent claim and therefore Applicant is unable to determine the Examiner's basis for the rejection of each of the claims to adequately rebut

the rejections. Therefore, as dictated by Oetiker "without more applicant is entitled to grant of the patent."

Claim 28 has been rejected as defining features which the Examiner admits to be absent in the applied references and yet takes "Official Notice" to dismiss the claimed features to be mere "design choice." The rejection is not well taken.

When [the Board] relies on "what they assert to be general knowledge to negate patentability, that knowledge must be articulated and placed on the record. ... The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies." In re Lee, 61 USPQ2d 1430, 1435 (Fed. Cir. 2002).

Claims 35 and 36 are patentable under 35 U.S.C. 103 over Krauer (U.S. Patent 4,966,047).

Claim 35 defines a clipper for locking the handle at desired positions and claim 36 defines the clipper as a parking brake.

Krauer does not describe, teach or suggest locking of the handlebar because Krauer's control member is mounted to rotate about the ends of the handlebar independent of the movement of the handlebar.

The courts have held, when the prior art contains apparently conflicting references, [the Board] must weigh each reference for its power to suggest solutions to an artisan of ordinary skill. In weighing the suggestive power of each reference, [the Board]

must consider the degree to which one reference might discredit another. In re Young, 18 USPQ2d 1089, 1091 (CAFC, 1991).

As pointed out above, the error in the rejection of the present claims stems from the Examiner's use of the term interchangeably and/or unilaterally as if the handlebar and control mechanism of Krauer's was a single element forms an erroneous basis for all the rejections of record. Krauer repeatedly describes the two elements to be separate so that they can be operated separately to thereby avoid controlling the cable and brakes with the handle. However, the Examiner's interpretation of Krauer does not originate from within the four corners of that reference and in fact is inapposite to the teachings of Krauer. Krauer does not and cannot render claims 35 and 36 obvious.

Citing In re Gordon, 221 USPQ, 1127, the court pointed out, "the mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification". In re Fritch, 23 USPQ2d 1783, 1784 (CAFC, August 1992). In the same case, In re Gordon, the court found a proposed modification inappropriate for an obviousness inquiry when the modification rendered the prior art reference inoperable for its intended purpose.

Claims 39, 40, 41, 42, as well as, claims 43, 44 and 45 are patentable under 35 U.S.C. 103 over Krauer (U.S. Patent 4,966,047) in view of Miyazaki (U.S. Patent 6,173,799).

Claims 39, 40, 41, 42, 43, 44 and 45 have been rejected as defining features which the Examiner admits to be absent in the applied references and yet takes "Official Notice" to dismiss the claimed features to be mere "design choice." The rejection is not well taken.

The Federal Circuit has held that the patent office is obligated to make necessary findings and to provide an administrative record showing the evidence on which the findings are based, accompanied by the agency's reasoning in reaching its conclusion. In re Zurko, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001). The decision "must be justified within the four corners of the record." In re Gartside, 53 USPQ2d 1769, 1774 (Fed. Cir. 2000). The Examiner has neither made the necessary findings nor provided any reasoning for the arbitrary conclusion of obviousness based on an admission that the references do not teach the claimed features.

Nothing in the references, either singly or in combination, teaches or suggests the claimed features. Therefore, the references cannot anticipate nor render obvious the present invention as claimed.

"... with respect to obviousness, ... court could not find that ...four patents, when combined with each other and unidentified 'other...prior art,' taught the very limitation that... none of them taught... Such a determination required the

assumption or inference... that somewhere in some prior art... [the claimed invention] was taught, and one of ordinary skill in the art would have known." Rockwell International Corp. v. United States, 1027, 1033 (CAFC 1998).

LEVEL OF ORDINARY SKILL IN THE ART

A person having ordinary skill in the art is an artisan being taught the reference teachings.

SUMMARY

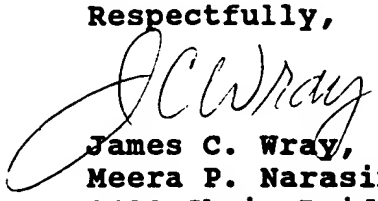
Each of the present claims is patentable under 35 U.S.C. 102 over the prior art of record.

When considering the present invention as a whole and the prior art to which the invention pertains as a whole, when considering the differences between the present invention and the prior art, and when considering the level of ordinary skill in the art to which the invention pertains, it is clear that the invention would not have been obvious under 35 U.S.C. 103 to a person having ordinary skill in the art at the time the invention was made.

CONCLUSION

Reversal of the Examiner and allowance of all the claims are respectfully requested.

Respectfully,



James C. Wray, Reg. No. 22,693
Meera P. Narasimhan, Reg.No. 40,252
1493 Chain Bridge Road, Suite 300
McLean, Virginia 22101
Tel: (703) 442-4800
Fax: (703) 448-7397

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APPENDIX

Appealed Claims:

3. The system of claim 46, wherein the drum assembly is a steel drum assembly.

4. The system of claim 46, wherein the drum assembly comprises a plastic drum with a steel liner.

5. The system of claim 46, wherein the drum assembly further comprises a drum and an enclosure for sealing and protecting the drum from external material.

6. The system of claim 5, further comprising a mounting plate for the drum brake assembly and connectors for mounting the plate to a rim of the wheel.

7. The system of claim 6, wherein the connectors are bolt or weld connectors.

8. The system of claim 5, further comprising the axle supporting two wheels of the wheelbarrow, wherein the drum is mounted centrally on the axle between the wheels.

9. The system of claim 46, wherein the control handle is a twist-type motorcycle handle mounted at an end of the handle bars of the wheelbarrow.

10. The system of claim 46, wherein the control handle twists to different degrees for activating the braking mechanism without losing contact with the handle bars of the wheelbarrow during braking.

11. The system of claim 10, wherein a slight twist of the handle slows the wheelbarrow.

12. The system of claim 10, wherein a quarter twist of the handle stops the wheelbarrow.

13. The system of claim 10, wherein an amount of force exerted upon the control handle is directly proportional to a degree of pressure exerted by the braking mechanism on the wheel of the wheelbarrow.

14. The system of claim 10, further comprising clipping means for locking the control handle at desired positions after twisting the handle.

15. The system of claim 14, wherein the clipping means forms a parking brake for the wheelbarrow by locking the control handle.

16. The system of claim 46, wherein the cable is a steel brake cable.

25. The system of claim 47, wherein the disc brake assembly further comprises a frame mounted caliper, wherein the disc is mounted on the wheel of the wheelbarrow, and wherein the caliper acts upon the disc for slowing the wheelbarrow by friction.

26. The system of claim 25, wherein the control handle is a motorcycle twist-type handle, and wherein the control cable connects the handle and the frame mounted caliper, thereby controlling engagement of the frame mounted caliper with the disc.

28. The system of claim 46, further comprising a second wheel on the axle for supporting the wheelbarrow, and wherein the

drum brake assembly is mounted in a center of the axle for simultaneously controlling rotation of the two wheels.

30. The system of claim 46, wherein the box has extensions for supporting the wheel, and wherein the control cable couples the control handle to the brake assembly for controlling movement of the wheel.

31. Braking apparatus comprising a braking mechanism including a brake, a twist-type handle and a brake cable connecting the twist-type handle and the brake, wherein the handle is twistable to a plurality of positions for controlling speeds of movement of vehicles coupled to the braking mechanism.

32. The apparatus of claim 31, wherein a twist of the handle slows the vehicles.

33. The apparatus of claim 31, wherein a quarter turn of the handle stops the vehicles.

34. The apparatus of claim 31, wherein an amount of force exerted upon the handle is directly proportional to a degree of pressure exerted by the brake.

35. The apparatus of claim 31, further comprising a clipper for locking the handle at desired positions.

36. The apparatus of claim 35, wherein the clipper forms a parking brake.

39. The apparatus of claim 31, wherein the brake is a drum brake.

40. The apparatus of claim 39, further comprising a brake arm connecting the brake cable to the drum brake.

41. The apparatus of claim 40, further comprising an internal drum mounted on a fixed rim of a wheel.

42. The apparatus of claim 39, further comprising a backing plate for the drum brake and spring-loaded brake shoes mounted on the backing plate, wherein the brake cable controls engagement of the drum brake with the wheels.

43. The apparatus of claim 31, wherein the brake is a frame mounted caliper having a wheel disc assembly.

44. The apparatus of claim 43, further comprising a disc coupled to the wheel disc assembly for engaging the wheels and reducing movement speeds by friction.

45. The apparatus of claim 31, wherein the vehicles include a wheelbarrow.

46. Wheelbarrow braking apparatus for controlling speed of a wheelbarrow comprising a wheelbarrow having a frame, a load-carrying box connected to the frame, first and second handlebars connected to the frame, an axle connected to the frame and a wheel on the axle, and further comprising a drum brake assembly having a brake drum on the wheel and a pair of spring-loaded brake shoes mounted inside the brake assembly for braking the wheel, a twist-type brake control handle mounted on one end of the first handlebar, a brake control bar connector connected to the brake shoes, and a control cable coupling the brake control bar connector and the twist-type brake control handle for activating the brake shoes and controlling movement of the wheelbarrow.

47. Wheelbarrow braking apparatus for controlling speed of a wheelbarrow comprising a wheelbarrow having a frame, a load-carrying box connected to the frame, first and second handlebars connected to the frame, an axle connected to the frame and a wheel on the axle, and further comprising a disc brake assembly having a brake disc on the wheel and a pair of spring-loaded brake calipers mounted outside the disc for braking the wheel, a twist-type brake control handle mounted on one end of the first handlebar, a brake control bar connector connected to the brake calipers, and a control cable coupling the brake control bar connector and the twist-type brake control handle for activating the brake calipers and controlling movement of the wheelbarrow.